

In re Patent Application of:

PERKINSON ET AL

Serial No. 09/912282

Filed: JULY 24, 2001

REMARKS

Applicants have reviewed the comments in items 1-4 on page 2 of the outstanding Office Action. If amendments to the claims are forthcoming in a future response, Applicants will number each line of the claims as requested.

Applicants do not understand item 3, as there are no parent priority applications referred to in the first line of the specification.

With respect to item 4, the trademark SPRINT has been capitalized throughout the specification. If additional notation is required, Applicants would appreciate an indication of exactly what is necessary.

The rejection of Claims 1-11, under the provisions of 35 U.S.C. § 103, for the reasons set forth in items 6-20 on pages 2-5 of the outstanding Office Action, is respectfully traversed.

Before discussing the shortcomings of the prior art relied upon in the outstanding Office Action, the present invention will be briefly reviewed, in order that differences between the cited prior art and the claims, which delineate the subject matter for which patent protection is sought, may be more readily appreciated.

As is described in the initial portion of the present specification, end users of frame relay access devices and like equipments can be expected to be technically unskilled or incompetent, so that there is a likelihood of error in their attempting to set up the equipment and establish a link to frame relay protocol communication networks. Even in the case of a relatively small network, supplying all of the necessary

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configuration parameters will translate into significant user participation in order to properly configure the device. The preferred installation is that of a 'plug-n-play' exercise.

In accordance with the present invention, this objective is successfully achieved by the means of an auto configuring mechanism which is operative to automatically identify the signaling role associated with the device of interest, and to identify the signaling protocol to be used by that device in communicating with another device.

As is shown in the flow chart of Figure 3 of the drawings of the present application, the present invention initially employs a random time-out interval during which the routine monitors the frame relay network for a poll from another frame relay communication device. If a poll from another device is received during the random time interval, then the frame relay device is automatically configured as a frame relay access device and the signaling protocol within the received poll is employed by that device.

On the other hand, if the random wait interval expires without having received any poll by another device, the routine proceeds to transmit one or more polling messages using different signaling protocols, as necessary, over the frame relay network. Then, in response to receiving a response from another frame relay communication device to a polling message that has been transmitted, the frame relay device of interest is automatically configured as a switch mode access device that uses the signaling protocol of the polling message to which a response was received.

This methodology is characterized in each of independent Claims 1 and 6, upon which Claims 2-5 and 7-11 respectively depend.

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Looking now at the prior art cited in the outstanding Office Action, the patent to Williams et al 6,144,669 describes a prioritized permanent virtual circuit management scheme in which the signaling protocol is established before any communications take place. There is no disclosure or suggestion anywhere in the patent of waiting a random time interval for a message that will enable the receiving device to automatically configure itself both as to signaling role and as to protocol, or the transmission of one or a sequence of messages which, when received, will cause the transmitting device to automatically configure itself as a switch mode device and set its protocol in accordance with that which was successfully received.

Applicants respectfully submit that the explanation of the rejection in item 7 on page 3 of the outstanding Office Action contains two major inaccuracies.

The first is that of item 7.(a) and (b). In column 5, lines 30-45, Williams et al describe the use of a polling mechanism by link management interface (LMI) protocol, wherein one networking device periodically polls another network device to inquire about the status of the permanent virtual circuits over a particular stream between the two devices.

It is noted that in column 5, lines 23-28, the patentees indicate that the invention may be implemented by using a choice of Annex A or Annex D, as desired. Namely, rather than not know the protocol and conduct a wait interval or a transmission interval to determine whether a message is received or a message is captured by another device, and then automatically configuring the device for the protocol type and signaling role as in the present invention, the Williams et al technique knows ahead of time and uses a specific protocol for carrying out its

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communications with other devices. The statement in item 7.(b) that Williams et al automatically configure the frame relay communication device as a frame relay access device that uses the signaling protocol in the received poll is inaccurate. There is no disclosure or suggestion of the same anywhere in the patent.

Column 6, lines 16-35 of Williams et al describe a line management polling process referenced as a permanent virtual circuit status process in which a user device can determine whether any permanent virtual circuits have become inactive on the network by comparing all the permanent virtual circuits reported in the presently full status report against a previously received full status report. This has nothing to do with the present invention as claimed in Claims 1-11.

Item 7.(c) further alleges that the above-referenced portions of Williams et al teach the transmission of one or more polling messages using different signaling protocols, as necessary, over a frame relay network. This statement is inaccurate. A re-reading of what is disclosed in Williams et al is invited. Applicants' review of the patent has found no such auto-configuring of both signaling role and protocol type based upon a random wait interval, or a transmission process as specifically delineated in the claims.

The conclusion reached in item 8 on page 3 of the Office Action is believed misplaced. The timeout employed in the protocol of the type employed by Williams et al is well defined, not random. There is no motivation to make it random as the timeout has specific default values once the protocol has been set up, it cannot be random.

Applicants agree with the statement in item 9.(d) at the top of page 4 of the outstanding Office Action that Williams et al do

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not teach the automatically configuring of the frame relay communication device as a switch mode access device that uses the signaling protocol of the polling message to which a response message was received. As pointed out above, Williams et al say nothing of automatically configuring the device as either a frame relay access device or a switch mode device or automatically setting the signaling protocol based upon a received message or response to a transmitted message.

The patent publication to Eslambolchi et al, US2001/0000700A1, describes a scheme in which a main configuration controller periodically polls switches in a frame relay network to obtain information about the permanent virtual circuits linking the switches. There is no disclosure or suggestion of what has been recognized in the outstanding Office Action to be absent from the patent to Williams et al.

Since neither Williams et al nor Eslambolchi et al perform any auto-configuring of signaling role or signaling protocol as defined in the independent claims, they certainly do not characterize the features of the dependent claims such as Claims 2-5 and 7-11.

For example, Claim 2 calls for repeating steps (a)-(d) as necessary, until either a poll or a response message to a polling message is received from another frame relay communication device, and configuring the frame relay communication device in accordance with the signaling protocol of the received poll or response. A similar recitation is found in Claim 8. No such repetition and automatic configuration as defined in these claims is found in Williams et al or Eslambolchi et al. The same is true of the other claims.

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As to the particular signaling protocol types being Annex D or Annex A, applicants do not dispute the fact that Williams et al make reference to both of these signaling types.

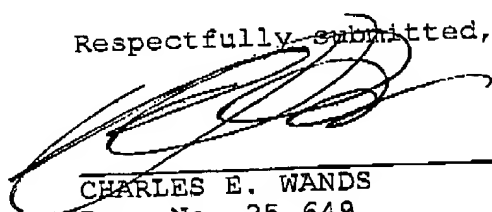
What Applicants do dispute is the allegation that Williams et al teaches an automatic signaling role and protocol configuration mechanism as defined in Claims 1-11.

Applicants respectfully submit that, upon reconsideration, it will be realized that the claims as originally filed define subject matter which is patentable over the art cited in the outstanding Office Action. Consequently, favorable reconsideration of this application and a Notice of Allowability of Claims 1-11 are respectfully requested.

Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 01-0484 and please credit any excess fees to such deposit account.

Respectfully submitted,

  
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J. Kallman

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